



TWINLOW[®]

...the world's finest insulating glass!



PITTSBURGH PLATE GLASS COMPANY

Up-to-date window insulation means year 'round comfort... in every room in the house!

TRULY NEW and up-to-date homes contain a multitude of labor-saving conveniences, such as built-in wall ovens, garbage disposals, automatic dishwashers and multiple bathrooms . . . a new concept in comfort.

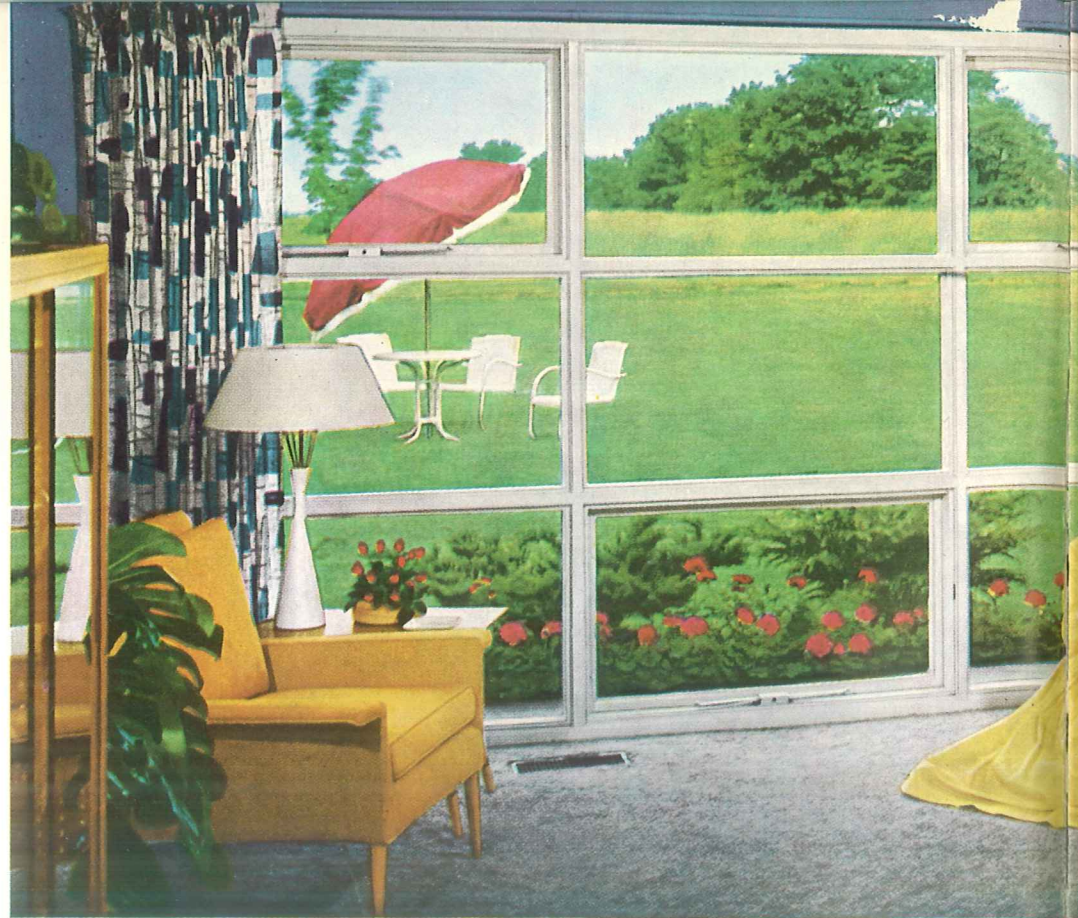
And truly new and up-to-date windows contain TWINDOW—the insulating glass that provides more comfort all year 'round! There's no longer any need for the semi-annual chore of changing, cleaning and storing storm windows. Now—you can have economical, efficient and *permanent* twin-glass insulation for every window in your house!

TWINDOW-Metal Edge, for example—two pieces of glass, separated by a hermetically sealed air space and completely surrounded by a stainless steel frame—is designed for your larger windows and sliding glass doors. TWINDOW-Glass Edge—the only electrically fused, all-glass insulating windowpane with a glass-to-glass sealed edge—is ideal for modern window wall construction.

With TWINDOW, your rooms are warmer in winter, cooler in summer. Your fuel bills and air-conditioning costs are lower. Busy homemakers will welcome the fact that TWINDOW has only two glass surfaces to wash, instead of four as there are with storm windows.

With TWINDOW, you have a *completely* new, a truly up-to-date home—one in which you can enjoy the changing seasons from a comfortable armchair . . . with relative freedom from chilly down-drafts, less fogging of windows . . . and without excessive, costly heat loss through the windowpanes!

Ask your architect or contractor about TWINDOW; he'll give you the specific information you need regarding glass in your home—whether you're building a new home or remodeling the old one—and he'll also explain why TWINDOW is a sound investment which increases the value of your home.



TWINDOW—for a lovely living room

TWINDOW—for a more pleasant, enclosed porch





TWINDOW—for a modern kitchen-dining area

TWINDOW—for a dining room with a view



TWINDOW—for your new family room



Here's how you save **SAVE TIME and WORK...**

- no storm windows!
- only two surfaces to wash!

TWINDOW eliminates the nuisance of putting up storm windows each fall, taking them down each spring. And less time is required to wash the two surfaces of TWINDOW than to wash the four surfaces that get dirty when you use storm windows. No storage problem with TWINDOW either!



with **TWINDOW** insulating glass

SAVE FUEL DOLLARS...

—cut heat loss almost in half!

TWINDOW cuts winter heat loss or summer heat gain through the window area by almost half. That's how TWINDOW saves you money in fuel and air-conditioning bills. TWINDOW's insulation makes it easier to maintain uniform, comfortable room temperatures. Permanent TWINDOW insulation for all windows may even make possible the use of a smaller heating system than is required for homes with single-glazed windows.



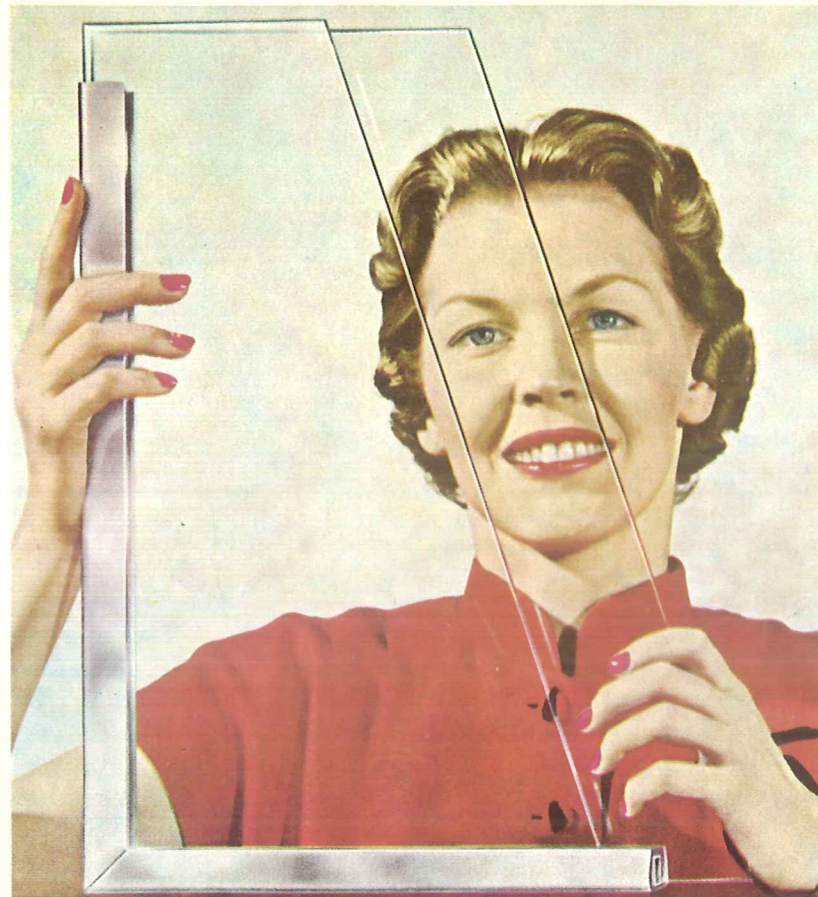
SAVE FLOOR SPACE...

—more usable floor space!

With TWINDOW, chilly downdrafts—often the penalty of large, uninsulated glass areas—are minimized. Thus, you can use more of the floor space in the room, closer to the window areas . . . in effect making your rooms larger! TWINDOW gives you “wall-to-wall *comfort*”—an especially attractive feature for your children!



Two types of **TWINDOW** make possible twin-glass

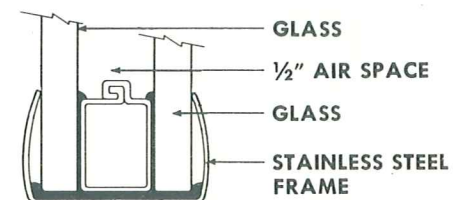


TWINDOW- metal edge

DESIGNED FOR "picture" windows and other large windows. Two panes of $\frac{1}{4}$ " Plate Glass are protected with a *stainless steel frame*—an outstanding feature of TWINDOW! This frame completely surrounds the edges of the panes, providing a firm, even edge for installation, and protecting the seal. A $\frac{1}{2}$ " air space between the panes is hermetically sealed, providing a "blanket" of dry, clean air between you and your view.

Generally, the glass is Pittsburgh Polished Plate Glass. Where day-long sunshine, unusual glare, or extreme heat is a problem—your architect may suggest a TWINDOW unit made up with other types of glass or combinations, such as SOLEX® Green Tint Heat-Absorbing Glass and regular Plate Glass . . . or SOLARGRAY® Neutral Gray Plate Glass and regular Plate Glass.

TWINDOW-Metal Edge is available in 60 standard sizes—which may be reversed, width and height, making 120 sizes.



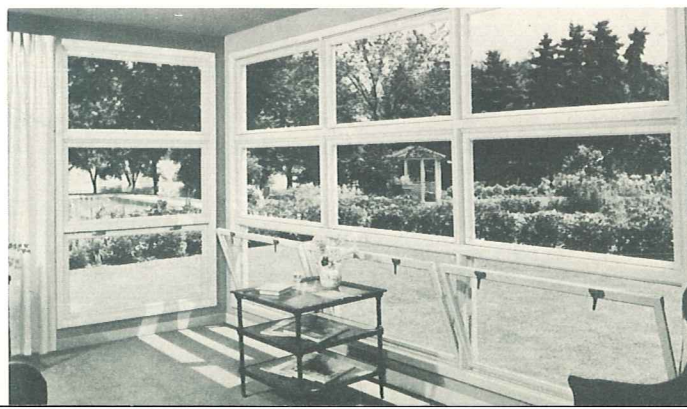
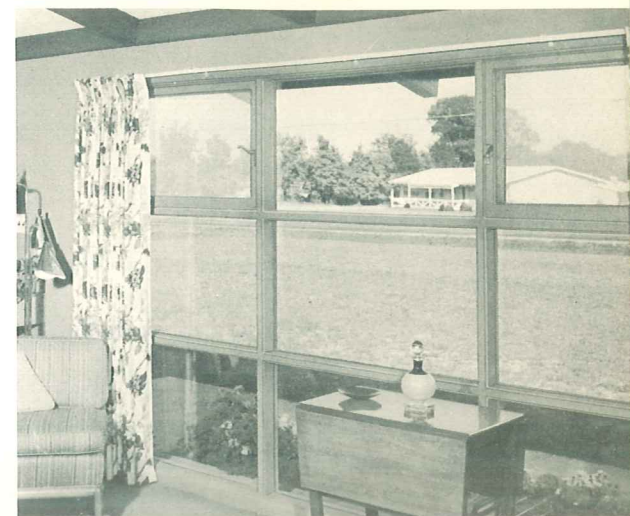
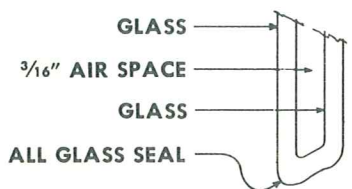
insulation for every room in the house

TWINDOW- glass edge

THE ONLY ELECTRICALLY FUSED, all-glass insulating windowpane, with a glass-to-glass sealed edge. This type of TWINDOW is composed of two panes of double-strength, quality PENNVERNON® Window Glass ($\frac{1}{8}$ " thick), separated by a $\frac{3}{16}$ " air space. As easy to install as a single pane of glass, you'll find TWINDOW, with an all-glass sealed edge, extremely well-suited for the popular "window wall" construction in modern homes, for smaller fixed panes in every room, for all types of operating windows.

Like TWINDOW-Metal Edge, TWINDOW-Glass Edge provides a means of cutting heating and air-conditioning costs, and reduces condensation problems to a minimum. Ask your architect or builder which type TWINDOW unit is best-suited for your particular application. Ask him to specify window sash that can accommodate TWINDOW.

TWINDOW-Glass Edge is available in 67 standard sizes.



Here's how you'll benefit with **TWINDOW**

THE MOST IMPORTANT single function of a TWINDOW unit is its ability to reduce the amount of heat loss or gain (by conduction) through a window area.

This means that TWINDOW in your home will:

- ... reduce fuel bills and save on air conditioning, because its insulating efficiency is almost *twice* that of ordinary, single-glazed windows
- ... eliminate the condensation that often occurs between the panes of single-glazed windows and storm windows
- ... minimize downdrafts near windows
- ... increase the surface temperature of the glass next to the room, thereby reducing body radiation to these surfaces
- ... reduce, under normal conditions, fogging and frosting on windows in winter
- ... eliminate the need for storm windows, since TWINDOW acts as a built-in storm window

And TWINDOW also deadens the transmission of outside noises, an additional contribution to your comfort!

This wide range of standard sizes makes it easy for you to enjoy the benefits of Twindow . . .

TWINDOW - Metal Edge, 2 Pieces $\frac{1}{4}$ " Polished Plate Glass— $\frac{1}{2}$ " Air Space

33"x76 $\frac{3}{4}$ "	44 $\frac{1}{2}$ "x60 $\frac{3}{8}$ "	48"x72"	50 $\frac{3}{8}$ "x60 $\frac{1}{4}$ "	58"x116 $\frac{1}{2}$ "
35 $\frac{1}{2}$ "x36"	45"x76 $\frac{3}{4}$ "	48 $\frac{1}{8}$ "x55 $\frac{1}{4}$ "	52 $\frac{1}{2}$ "x58 $\frac{1}{8}$ "	60"x72"
35 $\frac{1}{2}$ "x48 $\frac{1}{8}$ "	45 $\frac{3}{8}$ "x52"	48 $\frac{1}{8}$ "x68 $\frac{3}{4}$ "	52 $\frac{1}{2}$ "x70 $\frac{1}{8}$ "	60 $\frac{1}{4}$ "x66 $\frac{5}{8}$ "
35 $\frac{1}{2}$ "x60 $\frac{3}{8}$ "	46"x48 $\frac{1}{2}$ "	48 $\frac{1}{8}$ "x75"	55 $\frac{1}{4}$ "x60 $\frac{3}{8}$ "	60 $\frac{3}{8}$ "x68 $\frac{3}{4}$ "
36"x44 $\frac{1}{2}$ "	46"x64 $\frac{1}{2}$ "	48 $\frac{1}{8}$ "x93"	56 $\frac{1}{2}$ "x58 $\frac{1}{8}$ "	60 $\frac{3}{8}$ "x75"
36"x55 $\frac{1}{4}$ "	46"x72 $\frac{1}{2}$ "	48 $\frac{1}{2}$ "x50"	56 $\frac{1}{2}$ "x66"	60 $\frac{3}{8}$ "x93"
36"x68 $\frac{3}{4}$ "	46 $\frac{1}{8}$ "x52 $\frac{1}{2}$ "	48 $\frac{1}{2}$ "x58"	56 $\frac{1}{2}$ "x70 $\frac{1}{8}$ "	64 $\frac{1}{2}$ "x66"
36"x75"	46 $\frac{1}{8}$ "x56 $\frac{1}{2}$ "	50"x56 $\frac{1}{2}$ "	57"x76 $\frac{3}{4}$ "	66"x72 $\frac{1}{2}$ "
36"x93"	47 $\frac{1}{8}$ "x50 $\frac{3}{8}$ "	50"x64 $\frac{1}{2}$ "	58"x64 $\frac{1}{2}$ "	66"x84"
42"x66"	47 $\frac{1}{8}$ "x66 $\frac{5}{8}$ "	50"x72 $\frac{1}{2}$ "	58"x72 $\frac{1}{2}$ "	66"x96"
42"x72"	48"x48"	50"x80 $\frac{1}{2}$ "	58"x80 $\frac{1}{2}$ "	72"x84"
44 $\frac{1}{2}$ "x48 $\frac{1}{8}$ "	48"x60"	50"x96 $\frac{1}{2}$ "	58"x96 $\frac{1}{2}$ "	72"x96"

(Non-standard sizes are also available at slightly higher cost.)

SPECIAL STANDARD SIZES FOR "WINDOW WALL" CONSTRUCTION

For best vision—do not reverse Width (W) and Height (H)

2 Pieces $\frac{1}{8}$ " PENNVERNON® Window Glass— $\frac{1}{4}$ " Air Space
45 $\frac{1}{2}$ "(W) x 25 $\frac{1}{2}$ "(H) 42 $\frac{1}{2}$ "(W) x 22 $\frac{1}{2}$ "(H)

2 Pieces $\frac{3}{16}$ " PENNVERNON Window Glass— $\frac{1}{2}$ " Air Space
45 $\frac{3}{8}$ "(W) x 52"(H)

2 Pieces $\frac{1}{16}$ " PENNVERNON Window Glass— $\frac{1}{4}$ " Air Space
For Economy Sliding Doors

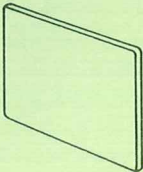
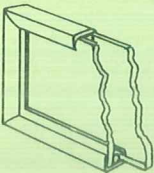
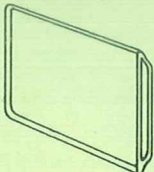
33"(W) x 76 $\frac{3}{4}$ "(H) 34"(W) x 76"(H)
45"(W) x 76 $\frac{3}{4}$ "(H) 46"(W) x 76"(H)

TWINDOW-Glass Edge, 2 Pieces $\frac{1}{8}$ " PENNVERNON Window Glass— $\frac{3}{16}$ " Air Space

For best vision—do not reverse Width (W) and Height (H)			
(W)	(H)	(W)	(H)
16" x 24"	20" x 60"	27 $\frac{1}{4}$ " x 14 $\frac{1}{4}$ "	36 $\frac{5}{8}$ " x 22 $\frac{1}{4}$ "
16" x 32"	21 $\frac{1}{16}$ " x 24 $\frac{5}{8}$ "	27 $\frac{1}{4}$ " x 18 $\frac{1}{4}$ "	36 $\frac{5}{8}$ " x 30 $\frac{1}{4}$ "
16" x 36"	21 $\frac{1}{16}$ " x 30 $\frac{13}{16}$ "	27 $\frac{1}{4}$ " x 22 $\frac{1}{4}$ "	39 $\frac{5}{8}$ " x 14 $\frac{1}{4}$ "
16" x 48"	21 $\frac{1}{16}$ " x 36 $\frac{13}{16}$ "	27 $\frac{1}{4}$ " x 30 $\frac{1}{4}$ "	39 $\frac{5}{8}$ " x 18 $\frac{1}{4}$ "
16" x 60"	21 $\frac{1}{16}$ " x 49"	28" x 16"	39 $\frac{5}{8}$ " x 22 $\frac{1}{4}$ "
16 $\frac{9}{16}$ " x 24 $\frac{5}{8}$ "	21 $\frac{1}{16}$ " x 61 $\frac{1}{16}$ "	28" x 20"	39 $\frac{5}{8}$ " x 30 $\frac{1}{4}$ "
16 $\frac{9}{16}$ " x 30 $\frac{13}{16}$ "	22" x 18"	28" x 24"	40" x 16"
16 $\frac{9}{16}$ " x 36 $\frac{13}{16}$ "	22" x 55 $\frac{9}{16}$ "	32" x 16"	40" x 20"
16 $\frac{9}{16}$ " x 49"	24" x 16"	32" x 20"	40" x 24"
16 $\frac{9}{16}$ " x 61 $\frac{1}{16}$ "	24" x 20"	32" x 24"	42 $\frac{1}{2}$ " x 22 $\frac{1}{2}$ "
19" x 15"	24" x 24"	33" x 21"	44" x 16"
20" x 16"	24" x 32"	34 $\frac{11}{16}$ " x 22 $\frac{11}{16}$ "	44 $\frac{5}{8}$ " x 14 $\frac{1}{4}$ "
20" x 20"	24" x 36"	36" x 16"	44 $\frac{5}{8}$ " x 18 $\frac{1}{4}$ "
20" x 24"	24" x 48"	36" x 20"	44 $\frac{5}{8}$ " x 22 $\frac{1}{4}$ "
20" x 32"	24" x 60"	36" x 24"	44 $\frac{5}{8}$ " x 30 $\frac{1}{4}$ "
20" x 36"	24 $\frac{1}{4}$ " x 15 $\frac{1}{4}$ "	36 $\frac{5}{8}$ " x 14 $\frac{1}{4}$ "	45 $\frac{1}{2}$ " x 25 $\frac{1}{2}$ "
20" x 48"	27 $\frac{1}{4}$ " x 10 $\frac{1}{4}$ "	36 $\frac{5}{8}$ " x 18 $\frac{1}{4}$ "	

(Non-standard sizes are also available in lots of 500.)

Insulating value of **TWINDOW** compared to single glass

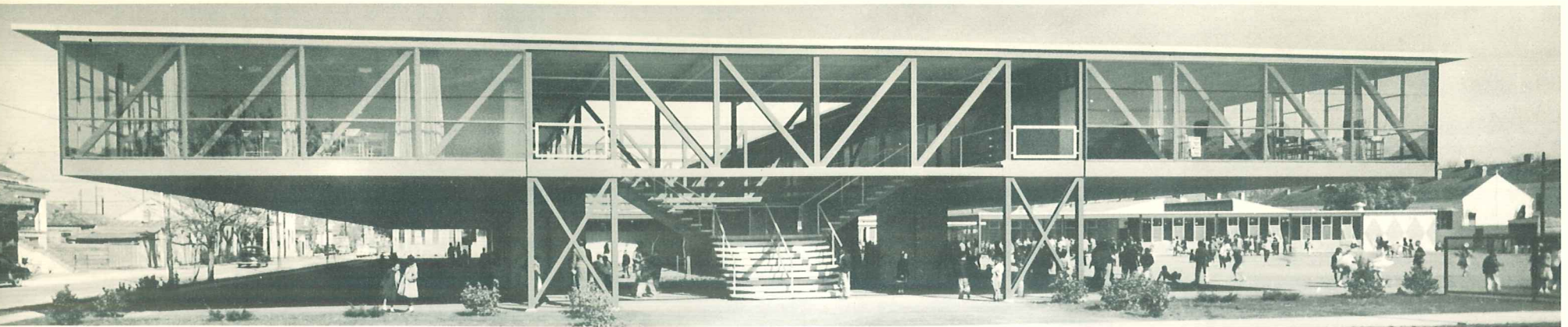
TYPE GLAZING	GLASS THICKNESS	AIR SPACE THICKNESS	"U"* VALUE	SAVINGS IN HEAT TRANSFER OVER SIMILAR AREA SINGLE-GLAZED WITH SAME THICKNESS GLASS
SINGLE 	1/8"		1.14	
	1/4"		1.12	
TWINDOW-Metal Edge 	1/8"	1/4"	.63	45%
	1/4"	1/4"	.61	46%
	1/8"	1/2"	.57	50%
	1/4"	1/2"	.55	51%
TWINDOW-Glass Edge 	1/8"	3/16"	.67	41%

*"U" VALUE is the amount of heat, expressed in BTU's, which will pass through one square foot of window area per hour for each degree Fahrenheit temperature difference between air on the inside and air on the outside. (Values shown are based on 70°F. temperature inside, 0 mph wind velocity; 0°F. outside, 15 mph wind velocity.)

THE AMOUNT OF HEAT TRANSFER by conduction through a window area determines—to a great extent—how much you'll spend heating or cooling a room. Under average conditions, regular TWINDOW double-glazed insulating units reduce the amount of heat transfer by about half the normal amount that is transferred through an equivalent area of conventional, single-glazed windows.

The table shows "U" values* for various glass combinations—and also shows that the thickness of the glass itself contributes relatively little to the "U" value.

Here's where **TWINDOW** has been time-tested in a variety



SCHOOL. Ever since the completion of this strikingly different school in New Orleans, favorable comments have been pouring in. In addition to installing SOLEX heat-absorbing, glare-reducing glass for its 22 classrooms, those rooms with southern exposures are protected by *double-glazed* units—SOLEX-TWINDOW.
Architect: Charles R. Colbert, New Orleans, La.



OFFICE BUILDING. The Lutheran Brotherhood Life Insurance Society home office building features "curtain wall" construction. For the vision areas in the "skin," PPG's SOLEX-TWINDOW was selected to provide built-in insulation, plus a means for reducing the strong heat and brightness of intense sunlight.
Perkins & Will, Architects-Engineers, Chicago, Ill., and White Plains, N. Y.

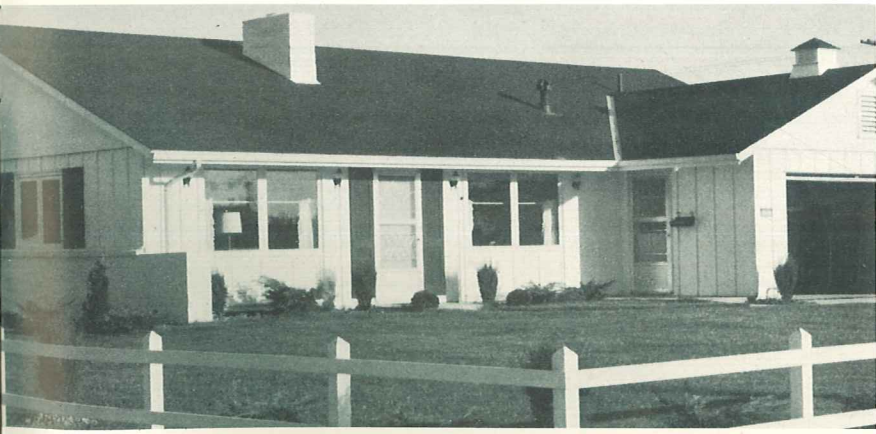
PRUDENTIAL INSURANCE COMPANY. Contributing to the over-all beauty of this impressive new structure in Chicago is the use of TWINDOW—the windowpane with insulation built in. Prudential finds that clear-vision Plate Glass TWINDOW units offer a panoramic view of the surroundings and help to keep interiors more comfortable.
Architects: Naess & Murphy, Chicago, Ill.
General Contractor: George A. Fuller Co., New York, N. Y.



of buildings...

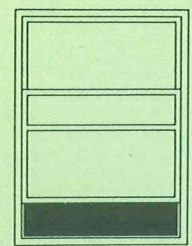


These attractive, modern homes show TWINDOW in a few of the many possible home applications. With two types of TWINDOW, you can now have TWINDOW in every window in the house!

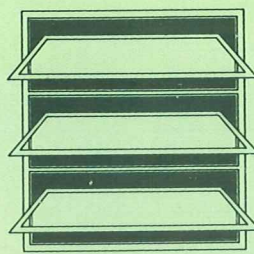


In fact, you can use **TWINDOW** in almost any type of sash.

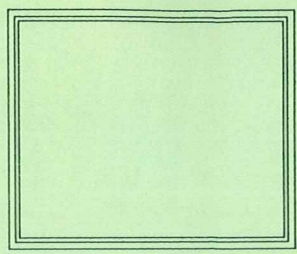
Here are some examples:



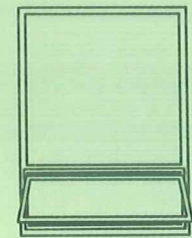
DOUBLE-HUNG



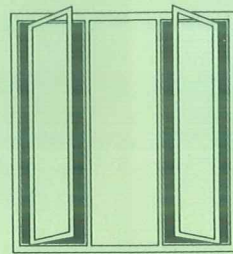
AWNING



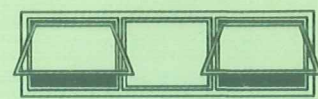
PICTURE



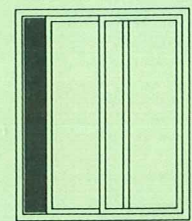
COMBINATION
(fixed top—
ventilating bottom)



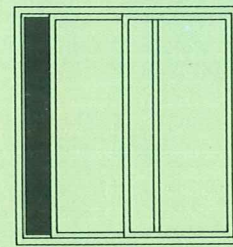
CASEMENT



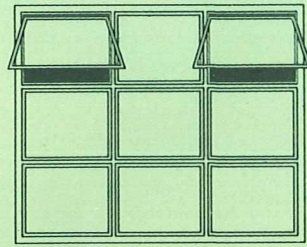
RIBBON



SLIDING



SLIDING DOOR



WINDOW WALL

GUARANTEE



DURING A PERIOD OF FIVE (5) YEARS after date of manufacture, TWINDOW INSULATING GLASS UNITS, installed in the United States or Canada, are guaranteed not to develop, under normal conditions, material obstruction of vision as a result of dust or film formation on the internal glass surfaces caused by failure of the hermetic seal other than through glass breakage. We make no other guarantee or warranty, expressed or implied.

This guarantee is effective only if installation is made in accordance with our specific instructions and does not apply to units damaged by improper handling or installation. This represents our maximum liability. Any units failing to comply with the terms of this guarantee will be replaced F.O.B. nearest shipping point to place of installation. This guarantee does not apply to replacement units beyond the original five (5) year period applying to the original unit.

Here's where to buy **TWINDOW**

Available in the following cities through **Pittsburgh Plate Glass Company**

Akron, O.	Boston, Mass.	Danville, Ill.	Gainesville, Fla.	Jackson, Mich.	Louisville, Ky.	Nashville, Tenn.	Pittsburgh, Pa.	Salina, Kan.	Tucson, Ariz.
Albany, Ga.	Bristol, Conn.	Danville, Va.	Galesburg, Ill.	Jackson, Miss.	Lubbock, Tex.	Newark, N. J.	Port Arthur, Tex.	Salisbury, Md.	Tulsa, Okla.
Albany, N. Y.	Brooklyn, N. Y.	Dayton, O.	Galveston, Tex.	Jackson, Tenn.	Lynchburg, Va.	New Bedford, Mass.	Port Huron, Mich.	San Angelo, Tex.	Tuscaloosa, Ala.
Albuquerque, N. M.	Brownsville, Pa.	Daytona Beach, Fla.	Gary, Ind.	Jacksonville, Fla.	Macon, Ga.	New Castle, Pa.	Portsmouth, N. H.	San Antonio, Tex.	Uniontown, Pa.
Allentown, Pa.	Buffalo, N. Y.	Decatur, Ill.	Grand Rapids, Mich.	Jeannette, Pa.	Madison, Wis.	New Haven, Conn.	Portsmouth, O.	Savannah, Ga.	Utica, N. Y.
Amarillo, Tex.	Burlington, Vt.	Denver, Colo.	Greeley, Colo.	Johnstown, Pa.	Malden, Mass.	New Orleans, La.	Portsmouth, Va.	Scranton, Pa.	
Anderson, Ind.	Butte, Mont.	Des Moines, Ia.	Green Bay, Wis.	Joliet, Ill.	Manchester, N. H.	New Rochelle, N. Y.	Poughkeepsie, N. Y.	Shreveport, La.	
Ann Arbor, Mich.	Canonsburg, Pa.	Detroit, Mich.	Greensboro, N. C.	Joplin, Mo.	Mansfield, O.	Norfolk, Va.	Providence, R. I.	Sioux City, Ia.	Vincennes, Ind.
Anniston, Ala.	Cedar Rapids, Ia.	DuBois, Pa.	Greenville, Miss.	Kalamazoo, Mich.	Marietta, Ga.	North Platte, Nebr.	Pueblo, Colo.	Sioux Falls, S. Dak.	Waco, Tex.
Asbury Park, N. J.	Charleston, S. C.	Dubuque, Ia.	Greenville, S. C.	Kansas City, Mo.	Marion, Ind.	Odessa, Tex.	Quincy, Ill.	South Bend, Ind.	Warren, O.
Ashtabula, O.	Charleston, W. Va.	Duluth, Minn.	Hagerstown, Md.	Kittanning, Pa.	Mason City, Ia.	Oklahoma City, Okla.	Quincy, Mass.	Spartanburg, S. C.	Washington, D. C.
Atlanta, Ga.	Charlotte, N. C.	Durham, N. C.	Hamilton, O.	Knoxville, Tenn.	McAllen, Tex.	Omaha, Nebr.	Racine, Wis.	Springfield, Ill.	Washington, Pa.
Atlantic City, N. J.	Cheyenne, Wyo.	Elgin, Ill.	Hammond, Ind.	Kokomo, Ind.	McKeesport, Pa.	Orlando, Fla.	Raleigh, N. C.	Springfield, Mass.	Waterloo, Ia.
Augusta, Ga.	Chicago, Ill.	El Paso, Tex.	Harlingen, Tex.	La Crosse, Wis.	Memphis, Tenn.	Oshkosh, Wis.	Reading, Pa.	Springfield, Mo.	Watertown, N. Y.
Aurora, Ill.	Cincinnati, O.	Enid, Okla.	Hartford, Conn.	Lafayette, Ind.	Midland, Tex.	Ottumwa, Ia.	Richmond, Ind.	Springfield, O.	West Allis, Wis.
Austin, Tex.	Clarksburg, W. Va.	Erie, Pa.	Hastings, Nebr.	Lake Charles, La.	Middleton, O.	Paducah, Ky.	Richmond, Va.	Sumter, S. C.	West Palm Beach, Fla.
Baltimore, Md.	Cleveland, O.	Fairmont, W. Va.	High Point, N. C.	Lakeland, Fla.	Milwaukee, Wis.	Pampa, Tex.	Roanoke, Va.	Syracuse, N. Y.	Wheeling, W. Va.
Baton Rouge, La.	Colorado Springs, Colo.	Findlay, O.	Homestead, Fla.	Lancaster, Pa.	Minneapolis, Minn.	Panama City, Fla.	Rochester, Minn.	Tallahassee, Fla.	Wichita, Kan.
Battle Creek, Mich.	Columbia, S. C.	Flint, Mich.	Homestead, Pa.	Lansing, Mich.	Mobile, Ala.	Parkersburg, W. Va.	Rochester, N. Y.	Tampa, Fla.	Wichita Falls, Tex.
Beaumont, Tex.	Columbus, Ga.	Florence, Ala.	Houston, Tex.	Lebanon, Pa.	Monroe, La.	Pasadena, Tex.	Rockford, Ill.	Terre Haute, Ind.	Wilkes-Barre, Pa.
Beaver Falls, Pa.	Columbus, O.	Fort Dodge, Ia.	Hutchinson, Kan.	Lexington, Ky.	Montgomery, Ala.	Pensacola, Fla.	Saginaw, Mich.	Texarkana, Ark.	Wilmington, Del.
Billings, Mont.	Corpus Christi, Tex.	Fort Lauderdale, Fla.	Indianapolis, Ind.	Lima, O.	Mt. Vernon, N. Y.	Peoria, Ill.	St. Joseph, Mo.	Tiffin, O.	Winston-Salem, N. C.
Binghamton, N. Y.	Cumberland, Md.	Fort Smith, Ark.	Iowa City, Ia.	Lincoln, Nebr.	Muncie, Ind.	Petersburg, Va.	St. Louis, Mo.	Toledo, O.	Worcester, Mass.
Birmingham, Ala.	Dallas, Tex.	Fort Wayne, Ind.		Little Rock, Ark.	Muskegon, Mich.	Philadelphia, Pa.	St. Paul, Minn.	Topeka, Kan.	Yonkers, N. Y.
Bluefield, W. Va.	Davenport, Ia.	Fostoria, O.		Lorain, O.		Phoenix, Ariz.	St. Petersburg, Fla.	Trenton, N. J.	Youngstown, O.
									Zanesville, O.

Also available from Pittsburgh Glass Distributors and on the Pacific Coast through the 58 branches of the **W. P. Fuller & Co.** Consult the classified section of your local telephone directory.